

Mr. Scott M. Darling
ALCOA, Inc. - Warrick Operations
P.O. Box 10
Newburgh, Indiana 47629-0010

Re: 173-10913
Modification to Operation Permits
OP 87-07-91-0112 thru 0116

Dear Mr. Darling:

ALCOA, Inc. - Warrick Operations was issued five operation permits on July 11, 1990 for the horizontal direct chill casting (HDC) and electromagnetic casting (EMC). An opacity variance was granted to ALCOA, Inc. - Warrick Operations on May 8, 1998. An extension of this variance was granted on May 11, 1999 and effective until May 8, 2000. The alternate visible emission limit established for the source shall be incorporated, by amendment, into the operating permits for the source. The Operating Permits have been modified by replacing the existing opacity condition with the variance language as follows:

6. ~~That pursuant to 326 IAC 5-1-2(a)(1) visible emissions (VE) from the stacks of any of the listed facilities shall be limited to 40% opacity on a 6-minute average basis as determined by VE readings taken in accordance with 326 IAC 5-1-4.~~

Pursuant to 326 IAC 5-1-5(b):

(a) #1 Complex (HDC)

The alternate opacity limit (AOL) applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) non-overlapping six-minute average opacity readings not to exceed 80% opacity, during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

(b) #8 Complex (EMC)

The AOL applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) nonoverlapping six-minute average opacity readings; two (2) of these sets of six-minute averages shall not exceed 85% opacity and the remaining four (4) six-minute averages shall not exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

Pursuant to 326 IAC 5-1-5(b)(3), this modification will become effective when this modification has been approved by the U.S. EPA as a revision to the State Implementation Plan.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this amendment and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Kimberly Titzer, at (800) 451-6027, press 0 and ask for extension (3-8396), or dial (317) 233-8396.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

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cc: File - Warrick County
U.S. EPA, Region V
Warrick County Health Department
Southwest Regional Office
Air Compliance Section Inspector - Dick Sekula
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner
Title V Permit File - T173-6627-00007
Rules Section - Pat Troth

Indiana Department of Environmental Management Office of Air Management

Summary of public comment period and public hearing

Source Name: ALCOA, Inc.
Source Location: Junction State Roads 66 and 61, Newburgh, Indiana 47630
County: Warrick
SIC Code: 3334, 3352
Operating Permit Modification: 173-10913
Operation Permit No.: 87-07-91-0112 thru 0116
Permit Reviewer: Kimberly Titzer

On July 15, 1999, the Office of Air Management (OAM) had a notice published in the Boonville Standard, Boonville, Indiana, stating that ALCOA, Inc. shall be granted an extension to the alternate opacity limit variance granted on May 8, 1998 and be incorporated, by amendment, into the operating permits for the source. The notice also stated that OAM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed. Also, a public hearing was held on Friday, August 6, 1999 at 6:00 P.M. at the Newburgh Town Hall.

On July 22, 1999, ALCOA, Inc. submitted comments on the proposed administrative amendment. The summary of the comments is as follows:

Comment 1: In both paragraphs 6(a) and 6(b), the term "temporary" is used to describe the alternative opacity limitations for #1 Complex and #8 Complex, respectively. This term must be removed from the text. The alternate opacity limits granted Alcoa were given under 326 IAC 5-1-5(b) {Violations}, not 326 IAC 5-1-3 {Temporary Alternative Opacity Limitations}. Section 5-1-5(b) in no way mentions or infers that the exemptions granted under this section are of a "temporary" nature.

Response 1: To clarify the opacity limit, the following change has been made:

(a) #1 Complex (HDC)

The alternate opacity limit (AOL) ~~A temporary exemption from the requirements of 326 IAC 5-1-2 as it applies to the exhaust stacks from the East and West Holding furnaces. This AOL temporary exemption from the opacity limit shall take the following form:~~

(b) #8 Complex (EMC)

The AOL ~~A temporary exemption from the requirements of 326 IAC 5-1-2 as it applies to the exhaust stacks from the East and West Holding furnaces. This AOL temporary exemption from the opacity limit shall take the following form:~~

On Friday, August 6, 1999, Scott Darling, Environmental Engineering Supervisor for ALCOA, Inc., presented an additional comment during the public hearing as follows:

Comment 1: In both paragraphs 6(a) and 6(b), the term "chlorine flux" is used. This inaccurately describes our "fluxing" process. During the testing conducted to demonstrate the need and appropriateness of the alternate opacity limits, a salt flux, chlorine gas and an inert gas were introduced into the furnaces during their "fluxing process". The phrase "chlorine flux" must be replaced with the phrase "fluxing process".

Response 1: The following change has been made to clarify the fluxing at the source:

(a) #1 Complex (HDC)

A temporary exemption from the requirements of 326 IAC 5-1-2 as it applies to the exhaust stacks from the East and West Holding furnaces. This temporary exemption from the opacity limit shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) non-overlapping six-minute average opacity readings not to exceed 80% opacity, during fluxing only. During all other periods of the production cycle (not including the **fluxing process** ~~chlorine flux~~), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

(b) #8 Complex (EMC)

A temporary exemption from the requirements of 326 IAC 5-1-2 as it applies to the exhaust stacks from the East and West Holding furnaces. This temporary exemption from the opacity limit shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) non-overlapping six-minute average opacity readings; two (2) of these sets of six-minute averages shall not exceed 85% opacity and the remaining four (4) six-minute averages shall not exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the **fluxing process** ~~chlorine flux~~), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

Upon further review, the OAM has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

- (1) The following change has been made to clarify the rule cite for which the variance and SIP revision is required:

1. ~~That pursuant to 326 IAC 5-1-2(a)(1) visible emissions (VE) from the stacks of any of the listed facilities shall be limited to 40% opacity on a 6-minute average basis as determined by VE readings taken in accordance with 326 IAC 5-1-4.~~

Pursuant to 326 IAC 5-1-5(b):

- (2) Since there was no discussion made in the permit of the sequence of events that led to this modification to the operation permits, the following outlines the steps that were taken for issuance of the variance as follows:
- (a) Particulate testing utilizing reference methods 1-5 was conducted on the #1 East and the #1 West holding stacks and the #8 East and #8 West holding stacks. 9 sample runs were conducted on each stack. During the sampling, fluxing times were increased to provide for "worst case" fluxing emissions.
- (b) The IDEM, OAM Compliance Data Section reviewed the test data and found the sampling procedures used and the results to be acceptable. The Compliance Data Section also evaluated the opacity data submitted with the test report for determination of an alternate opacity limitation.

- (c) Data was plotted in a graph to determine if there was a trend to the data relative to the flux cycle. From this graph, came a clear level for the temporary exemption, which was 80% for #1 East and West Holding and #8 East and West Holding furnaces.

The IDEM, OAM, will submit this permit modification and all supporting information to the U.S. EPA as a revision to the State Implementation Plan.